

APPARATUS FOR RETRIEVING  
DATA FROM  
DETACHABLE OPTICAL DRIVER

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DESCRIPTION

BACKGROUND OF THE INVENTION

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*Field of the Invention*

The present invention relates a platform of detachable media player. By a modulized design, the goal to play the different format optical data or media data can be reached by only stacking different reading devices.

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*Background Description*

The prosperous development of digit content and information has brought the human being into the colorful media era. The digital content's multi-media data such as music, video, pictures, games and digital database etc. mostly requires a significant storage space; thus, it leads the fast development of the mass storage device. Although the fast development of the mass storage device provides the users a great convenience about the storage device; however, upon the varied storage formats, encoding ways, and read/write techniques, the different devices are with the different specifications. This causes a great inconvenience about the interflow of data; moreover, when the user is choosing the playing device, the user has to pick among those with the different

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specifications; then the one has been chosen is usually able to read the CD of single one format or of limited formats. Assume to read the CD or the storage device of another specification, it requires to use another playing device; it causes a great inconvenience use-wise. Additionally, for two different CD playing devices, besides the different read/write mechanisms, many of the rest components are duplicated. It also leads into the waste of resource. Therefore, the present invention offers a modulized design for the users who only need to switch the corresponding module and stack on the data playing platform in order to read the varied CDs or data storage formats, further to meet the advantages of economy, flexibility and upgradeability.

Traditionally, the known CD playing platform is able to read and play one CD format. Its benefits are low cost and easy application. However, being able to read only one CD format causes the limitation. In other words, it requires another player to read and write the optical compact disk, such as DVD or other format, and it's the significant waste of resource as well.

In order to improve the drawback of the playing platform as above, another known media player adopts the multi-function read/write device to read and play the CD with the various formats. Because of the expensive multi-function read/write device, it leads the high price of such player. Besides, what can play on such player is still limited, some specific players are still required for some specific formats. It's still not flexible use-wise. If the user would like to have the other format

of optical compact disk being read, the user has to buy another compact disk player. Nonetheless, if the above-mentioned multi-function read/write device is broken or fails, the user seldom repairs it. Most likely, the user will buy a new one. In this case, it wastes money and resources since some common parts of the failed device are still same, workable or adoptable.

#### SUMMARY OF THE INVENTION

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According to the above objects and to solve the known shortcomings like the inflexibility of player's specification, multi-function and the price, the present invention offers a modulized design for the users who only detach different reading devices upon the varied needs in order to meet the objects of the flexibility and multi-function.

In another object of the present invention, it is to mitigate the complexity of the optical data reading device and further to reduce its price.

In another object of the present invention, by applying the modulized design, when the reading drive of the platform is malfunctioned or needs to be upgraded, only the reading drive needs to be replaced and detached with another one; hence, it can save the cost from maintenance or upgrade.

According to the above objects, the present invention offers a platform of detachable media player, which includes: a detachable box; a signal import and

export device installed in said detachable box; a playing platform for said detachable box being detached inside said playing platform; and a decoding module connecting to and positioned inside said playing platform for being  
5 able to export said data to a display facility.

In another aspect of the present invention, the signal import and export device is an optical reading and writing device and more specifically a DVD rewritable  
10 drive.

In yet another aspect of the present invention, the decoding module is a MPEG decoder and the display facility is a television.  
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Furthermore, the data accessed by the optical reading and writing device is stored in a storage device. The data is transmitted to and recorded in an optical disk by the optical reading and writing device.  
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In another aspect of the present invention, besides the way to pile up the detachable boxes and to get connected with the platform, the data reading drive also can be accessed through the common industrial transmission  
25 standards (as the interfaces of USB, IEEE 1394, IDE, SCSI, 802.3 or 802.11b) to get connected with the playing platform.

In another aspect of the present invention, in accord  
30 to the switch of the different data reading device, the encoding/decoding module can be filled in with the different one even can be copied with the different

encoding/decoding programs upon requirements.

#### BRIEF DESCRIPTION OF THE DRAWINGS

5           The foregoing and other objects, aspects and advantages will be better understood from the following detailed description of a preferred embodiment of the invention with reference to the drawings, in which:

10           Figure 1 illustrates the detachable way of the present invention; and

          Figure 2 is a schematic diagram showing the second embodiment of the present invention.

#### 15           DETAILED DESCRIPTION OF A PREFERRED EMBODIMENT OF THE INVENTION

          In order to provide a clear description and better understanding, charts/diagrams are not drawn in portion and relative scale. The size of some parts is also  
20           exaggerated compared in scale to other related parts. To be more concise, irrelative details are not drawn completely.

          Please refer to Figure 1, a data read/write device  
25           11 held by a detachable box 12 is connected with a playing device 13; and the data accessed by the data read/write device 11 is decoded by an encoding/decoding module 14 then is played by the playing device 13. Besides playing the data accessed by the data read/write device 13, via  
30           the encoding/decoding module 14, the playing device 13 also can encode the data into a certain data format. Then through the data read/write device 11, data is processed

to copy and write into the particular CD or the storage media.

Accordingly, Figure 2 shows a second embodiment of the present invention. The present invention can be implemented by combined detachable and stackable method: a data read/write device 21 held by a stackable box 22 is piled up on the top of a playing device 23; and the data accessed by the data read/write device 21 is decoded by an encoding/decoding module 24 and is played by the playing device 23. Besides playing the data accessed by the data read/write device 21, via utilization of the encoding/decoding module 24, the playing device 23 also can encode the data into a certain data format then through the data read/write device 21 to copy and write to the particular CD or the storage media.

In general, the present invention offers an detachable optical data storage playing device, which includes a data reading drive to read the data on CD; a detachable box to hold the data reading drive; a player to carry the detachable box and to connect with the data reading drive further to play the data accessed by the data reading drive; and an encoding/decoding module to provide the encoding/decoding programs required by the data reading drive. The data reading drive can also be a writing device; with the programs in the encoding/decoding module, the data played in the player is able to be encoded into the certain format and to write into a CD.

Plus, the data reading drive can also be a varied

data format read/write drive such as CD-ROM, CD-RW,  
DVD-ROM, DVD-RW, DVD-Audio, SACD or HDD. Moreover, in  
accord to the switch of the different data read/write  
drive, the encoding/decoding module can be filled in with  
5 the different one or even can be copied with the different  
encoding/decoding programs upon requirements.

The data read/write device can just be hard disk  
for reading and writing data, such as media information  
10 thereon. The data is stored in the hard disk and can be  
transmitted to and recorded in an optical disk by an  
optical reading and writing device. If detachable boxes  
are piled up on the top of the playing device, data from  
the various sources can be simultaneously processed and  
15 further to play and to write back in an optical recorder  
or the hard drive.

For the description as above, a superior exemplary  
implementation, as the second embodiment shown in Figure  
20 2 includes: a data read/write device: to read the data  
stored in CD or to write in accordance with the certain  
format; a detachable box: to hold or to be stacked with  
the data read/write device; a playing device: to cradle  
the detachable box and to connect with the read/write  
25 device for playing the data accessed by the data read/write  
device; an encoding/decoding module: to provide the  
encoding/decoding programs required to play the data  
accessed by the data read/write device. Besides playing  
the data accessed by the read/write device, by utilizing  
30 the read/write device, the playing device can also copy  
the data and write into the specific CD or storage media.  
Furthermore, for more apparent illustration and easier

apprehension of the present invention, the contents in  
the drawings are not drawn to the proportion, some  
measurements and the related scales have been exaggerated;  
also for the purpose of simplicity, some unconcerned parts  
5 are not completed in the drawings.

Although preferred embodiments of the present  
invention have been described in the forgoing description  
and illustrated in the accompanying drawings, it will  
10 be understood that the invention is not limited to the  
embodiments disclosed, but is capable of numerous  
rearrangements, modifications, and substituting of parts  
and elements without departing from the spirit and scope  
of the invention. Accordingly, the present invention is  
15 intended to encompass such rearrangements, modifications,  
and substitutions of parts and elements as fall within  
the scope of the appended claims.